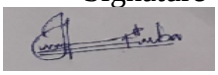
MES COLLEGE OF ENGINEERING, KUTTIPPURAM
DEPARTMENT OF COMPUTER APPLICATIONS
20MCA245 – MINI PROJECT

PRO FORMA FOR THE APPROVAL OF THE THIRD SEMESTER MINI PROJECT

(Note: All entries of the pro forma for approval should be filled up with appropriate and complete information. Incomplete
Pro forma of approval in any respect will be rejected.)

Mini Project Proposal No : 1 *(Filled by the Department)*	Academic Year : 2021-2022 Year of Admission: 2020

1.Title of the Project : Real Time Fake News Detection Using Machine Learning
2.Name of the Guide : Syed Feroze Ahamed M
3.Number of the Student : 1
4.Student Details (in BLOCK LETTERS)

	Name	Roll Number	Signature
1.	HIBA NAFEESATH	20	

Date:

Approval Status : Approved / Not Approved

Signature of
Committee Members

Comments of The Mini Project Guide Dated Signature

Initial Submission :

First Review :

Second Review :

Comments of The Project Coordinator Dated Signature

Initial Submission:

First Review :

Second Review :

Final Comments : Dated Signature of HOD

REAL TIME FAKE NEWS DETECTION USING MACHINE LEARNING

20-HIBA NAFEESATH

Introduction:

In traditional news making procedures, very limited and authorized individuals are involved and newspapers, radio,television were the only source of news. Due to these reasons news, credibility and authenticity are preserved. But in the era of internet, social network is becoming a news source of news. Easy and free access to these social networks makes the task of fabricating fake news and manipulating news a very effortless task. There is no authorize control point of these manipulated fake news which creates a question over there credibility and authenticity. The ease of getting direct news from the platform they mostly use has attracted the user. The reason to spread fake news can be social, political, and economical. Fake news in business can affect the stocks of the company leading to a huge capital loss. During the election campaign, fake news is used as a weapon against each other in a political war to defame the opposition. The most adverse effect is seen when it is used to spread communal hates which leads to riots. The Delhi riots are the best example of the destruction caused by fake news.Fake news about the COVID-19 in India lead to an attack on the medical team in various parts of the country and thus making the fight against the virus weak. The rate at which it spread is very fast due to which controlling the spread manually is not possible.There is no platform via which the user can check the credibility and authenticity of the news and where authorities can directly inform about the fake news prevailing. Due to which people can believe in the news which can be a trouble for them and as well for society also. In the existing system, the action is taken after the adverse impact had already hit society. The proposed platform is useful for both common people and official authorities to prevent the spread of rumours in form of news.

Objectives:

Our objective is to find the best Machine Learning Algorithms and Natural Learning Process methods for the prediction of news. Then the best performing model will be saved and will be linked to a user interface by which it can predict new input data in real-time. To achieve this objective training data have to go through various intermediate processes before giving it to Algorithms. The main parameters on which the performance of the model will be judge are F1 score and accuracy of the model.

Problem Definition:

Fake news can be used for economic as well as political benefits. It can be used as a weapon to spread hate among the community which can harm society. So it is crucial to detect fake news to avoid its consequences. There is no existing platform that can verify the news and categorize it. This paper proposes a system that can be used for real-time prediction of news to be real or fake.
This system is based on natural language processing to extract features from the data and then these features are used for the training of machine learning classifiers such as Naive Bayes, Support Vector Machine (SVM), Random Forest (RF),Stochastic Gradient Descent (SGD), and Logistic Regressio(LR). Each of the classifier performance is evaluated on various parameters. Then the best performing classifier is deployed as a website using flask API for real-time prediction of the news.

Basic functionalities:

- Easy and free access to these social networks makes the task of fabricating fake news and manipulating news a very effortless task.
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Tools / Platform, Hardware and Software Requirements:

Hardware specification:The selection of hardware is very important in the existence and proper working of any software. Then selection hardware, the size and capacity requirements are also important.

- Processor : Intel Pentium Core i3 and above
- Primary Memory : 4 GB RAM and above
- Storage : 500 GB hard disk and above
- Display : VGA Colour Monitor
- Key Board : Windows compatible
- Mouse : Windows compatible

Software specification: One of the most difficult tasks is selecting software for the system, once the system requirements is found out then we have to determine whether a particular software package fits for those system requirements. The application requirement:

- Front end : Python Django
- Back end : SQLite
- Operating system : windows 7 and above
- IDE : Visual Studio Code
- Others : HTML,CSS